



ABSTRACT

A manufacturing process for producing a particulate reactor substrate according to the invention includes the steps of first roll-stamping small, raised dimples into the fabric substrate to control its coiled density. The dimpled fabric then undergoes high temperature firing for hardening and degreasing, and then water quenching to harden the metal which improves heat tolerance. The treated metal weave is then aluminum oxide shot-blasted to etch the fabric surface for improved ceramic coating adhesion and to increase surface area. Next, the fabric is coated with a wet slurry of an undercoating ("wash coat") prior to spooling and pressing the fabric into individualized cartridges that are held tightly wound by an encircling sleeve. Next, the sleeved spools are oven-fired and then the fired spools are impregnated with the catalytic precious metal. The impregnated sheathed spools are finally oven-fired again and "canned" into an outer enclosure.